IFIXIT

THE FUTURE OF THE
RIGHT TO REPAIR
& FREE SOFTWARE

LibrePlanet 2023
Boston, MA

Elizabeth Chamberlain

19 March 2023

liz@ifixit.com

92,724

free repair manuals

Black and Decker TR1278B Repair

The Black and Decker TR1278B is a wide slot toaster with bagel, frozen, and cancel options as well as seven shade options and a drop-down crumb tray.

Author: Geoff Wacker (and 5 other contributors)

Create a Guide   I Have This

Guides

Replacement Guides

Bread Grabber Spring	Circuit Board
Lever Catch Spring	Top Cover

John Deere 870 Oil Change

Written By: David Hodson (and 6 other contributors)

Comments: 5   Favorites: 23   Completions: 8

⊙ Difficulty		Moderate
≣ Steps		15
⧖ Time Required	Suggest a time	??
⊞ Sections		1
⚠ Flags		0

Introduction

Change your tractor's engine oil and filter every 100 hours of use to keep your crops coming season after season.

POWERBOOK G3 PISMO REPAIR

Guides
   Replacement
Support Questions
Tools
Details
   Troubleshooting
   Upgrades
   Identification and Background
   Additional Information

PowerBook G3 Pismo Repair

Model M7572 / 400 or 500 MHz G3 processor

Author: Miroslav Djuric (and 7 other contributors)

Create a Guide   I Have This

Guides

Replacement Guides

Airport Card	Clutch Cover	Display
Framework	**FEATURED** Hard Drive	Heat Shield
Heat Sink	I/O EMI Shield	Inverter
Keyboard	Logic Board	Lower Case
Modem	Optical Drive	PC Card Cage
PRAM Battery	Power Card	Processor
FEATURED RAM	Sound Card	Upper Case

Community

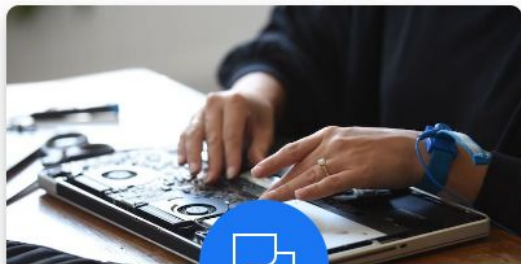Community   Participate   Translate   Leaderboard   Teams   Businesses   Patrol

Solve Problems

Get help from friendly fixers and share a helping hand with others around the world.

Answers Forum

Improve iFixit

Help us improve how-to guides that others have started and become a guardian of good quality.
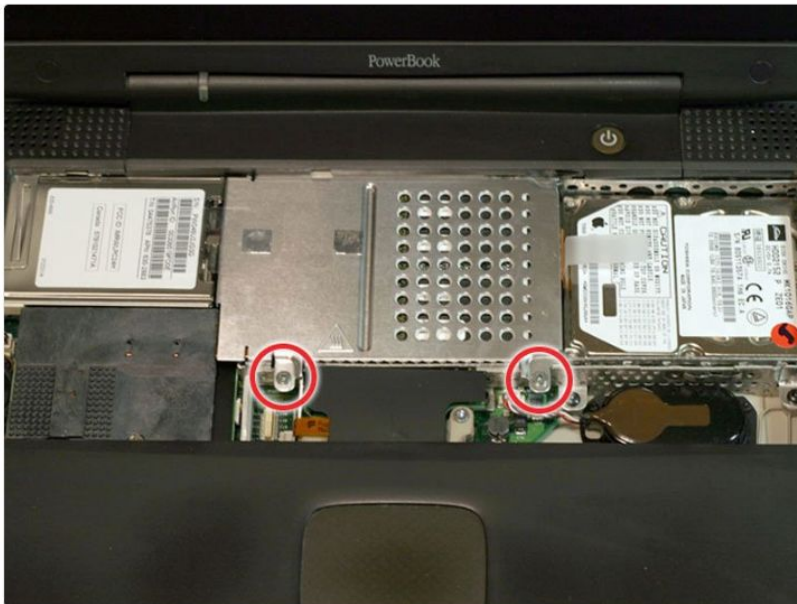
Improve Guides

Help Translate

Translate iFixit into your mother tongue and make repair information available to everyone!

Start Translating

Step 4 — Heat Shield

- Remove the two silver Phillips #1 screws that attach the heat shield to the internal metal framework.

- Lift the heat shield up and pull it toward you.

One comment

Add a comment

On my M7572, these are T9s not Philips.

Rufleyboy - May 5, 2010

Introduction　　Details　　**Guide Steps**

Editing Step 2 — Add a title

Notice: You are now editing a prerequisite to the guide you were just viewing. Any changes you make will affect all 4 guides that include this step.

Step Type: ⌨️　　[📷 **Image**]　[🎥 Media]

● Remove the sprocket guard plate.

[Save]

Drag to rearrange

[🗑 **Delete Step**]　　　　　　　[＋ Insert Step]

Steps　　　　⇄ Rearrange

Privacy

[🌐 Public]　[Private 🔒]

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All Parts

All Parts

Quality ensured replacement parts for DIY repair

Repair with confidence! iFixit has you covered with parts, tools, and free repair guides. All of our replacement parts are tested to meet rigorous quality standards and are backed by our industry-leading guarantee.

Choose a model

Mac Parts	iPhone Parts	Android Phone Parts	PC Laptop Parts
Game Console Parts	iPad Parts	Android Tablet Parts	iPod Parts
Chromebook Parts	Other Electronics Parts		

iPod Classic Teardown

Published: September 24, 2009

Comments: 7   Favorites: 141   Views: 286.7k

Tools Featured in this Teardown

iFixit Opening Tool
$1.99

[Buy]

Introduction

We disassembled this iPod on September 7, 2007.

Step 1   iPod Classic Teardown

- Apple ships two new iPods on the same day, and we take apart two new iPods on the same day (well, the same shift).

- We title this picture, "rising to the challenge."

Step 1 — Battery

- Apple designed their new iPods to be very difficult to take apart without destroying major components. Because of the metal faceplate, the metal backing, and the 13 (yes, 13) metal clips holding the case together, this is one of the toughest iPods to disassemble.

- ⚠ Proceed with caution and the warning that you may significantly damage your iPod beyond its present condition. Also, you may want a few extra pairs of plastic opening tools during installation, as they are easy to ruin when opening the iPod. Have fun!

- Before opening your iPod, ensure that the hold switch is in the locked position.

Final Thoughts

✅ Displays and back glass covers can be replaced without disassembling any other components.

❌ Batteries are glued and require extensive disassembly to service.

❌ The USB-C port is soldered directly to the main board.

❌ Uncommon tri-point screws secure key components.

❌ Delicate OLED panels are not well protected from accidental prying, yet must be removed for most repairs.

❌ Stubborn glue at all entry points complicates any repair attempt.

Repairability Score

2

Repairability 2 out of 10
(10 is easiest to repair)

iFIXIT COLLABORATION TIMELINE

| 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |

- patagonia — 2013
- FAIRPHONE — 2015
- hp — 2016
- motorola — 2017/2018
- THE HOME DEPOT — 2018
- logitech — 2019
- Microsoft — 2020
- VALVE — 2021
- SAMSUNG — 2022
- G (Google) — 2022

RIGHT TO REPAIR

If you bought it, you own it—and you should be able to fix it.

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On last season of
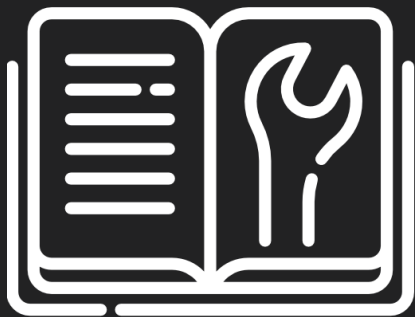**RIGHT TO REPAIR**

IFIXIT

WINS?

25 November 2022

New EU rules for smartphones and tablets: still far from a true Right to repair

Reaction from Right to Repair Europe on the still unpublished new ecodesign rules for smartphones and tablets. A positive step, but far from a real Right to Repair
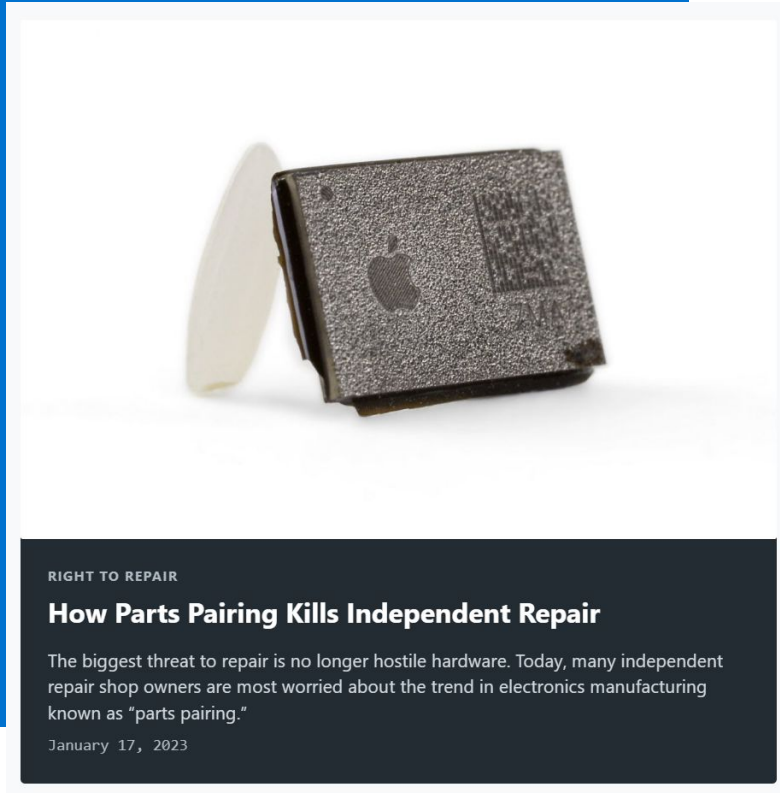
7 years   **5 years**

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cool, but

How Parts Pairing Kills Independent Repair

The biggest threat to repair is no longer hostile hardware. Today, many independent repair shop owners are most worried about the trend in electronics manufacturing known as "parts pairing."

January 17, 2023

cool, but

OVERPRICED HARDWARE

OVERPRICED HARDWARE EVERYWHERE

WINS?

ACTIVISM

New York Passes Historic Right to Repair Bill

The world's first comprehensive right to repair bill has finally been signed into law by New York Governor Kathy Hochul, over six months after it passed the legislature nearly unanimously....

December 29, 2022 by Kyle Wiens

cool, but

NEWS 10 & LOUIS ROSSMANN

HOW THE NEW YORK GOVERNOR SABOTAGED RIGHT TO REPAIR!

6:54

Discussing Kathy Hochul's butchering of right to repair with News10's Amal...

Louis Rossmann ✓

105K views • 3 weeks ago

cool, but

assemblies

Item # IF358-031-4

Samsung Galaxy S21 5G (USA) Screen and Battery - Genuine

$160.99

★★★★★ 5 | 2 reviews

IFIXIT

EXPLODING BATTERIES

Watch on YouTube

cool, but
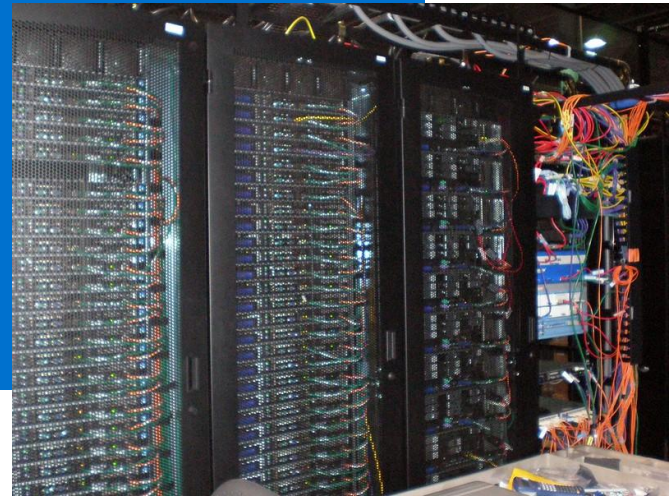
goal #1
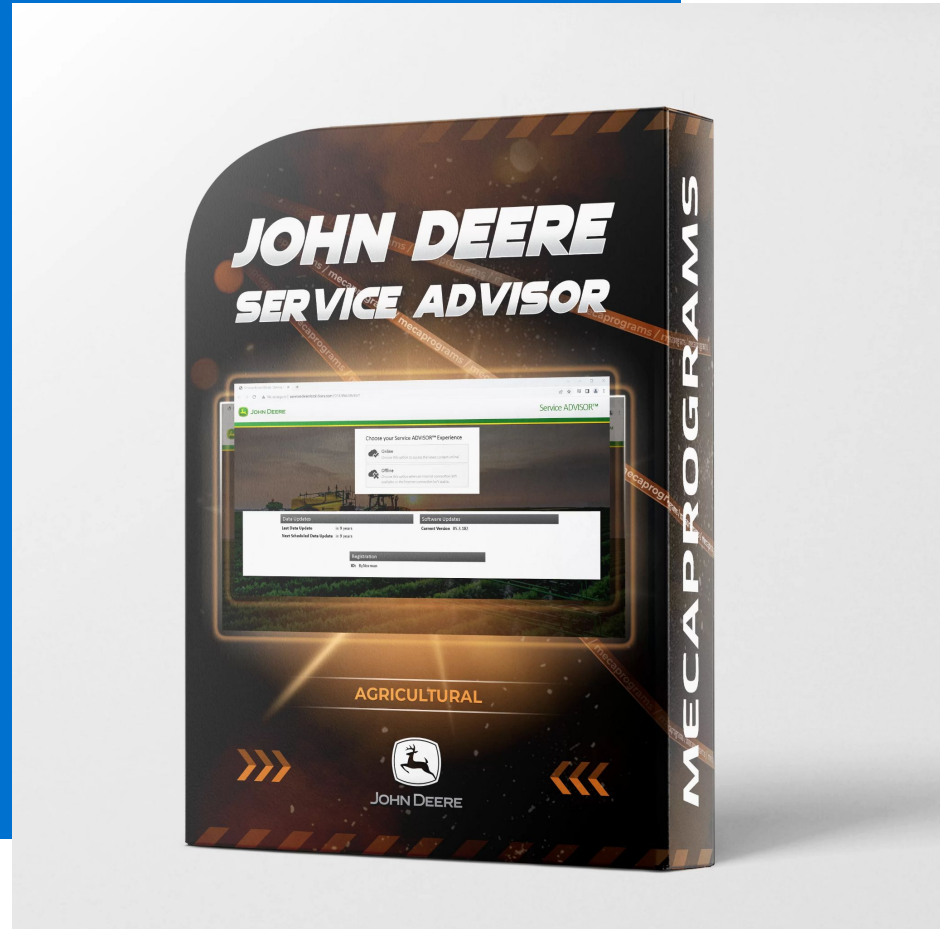## parity with manufacturer repair

IFIXIT

WINS?

cool, but

cool, but

Success

Success

what people think
it looks like

what it really
looks like

Label

Colour corresponds to level of reparability in 2 point intervals

8,7 /10
INDICE DE RÉPARABILITÉ

Les paramètres de calcul de l'indice de réparabilité sont disponibles sur la page du produit concerné sur Boulanger.com ou auprès d'un conseiller.

Garantie 2 ans indépendamment de la garantie commerciale Boulanger, vous bénéficiez des garanties légales (conditions dans Boulanger vous informe, à l'entrée du magasin)

Pièces détachées : Pendant 10 ans, à compter de la date d'achat

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Il permet de préparer vos linges délicats lors du lavage

Permet de laver votre linge spécifique pour bébé, te tout sécurisé

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EFFICACITÉ D'ESSORAGE B

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...60TS552DAW

0001150401

22 December 2022

The EU battery directive will make it easier to replace batteries

We celebrate an important repair win on part pairing: this directive finally bans software tricks which hinder the replacement of batteries. We regret however, that an exemption for products used in wet conditions leaves many products such as electric toothbrushes with hardly replaceable batteries.
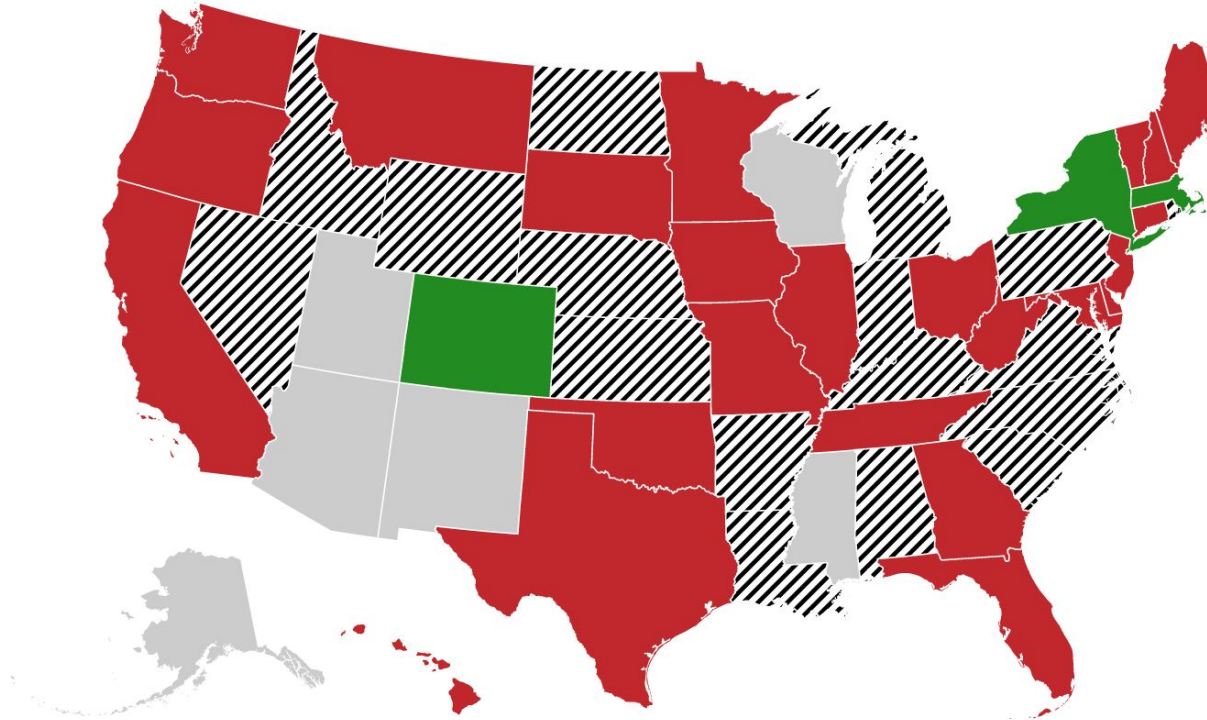
Jan 23, 2023 - Technology

Flood of "right to repair" bills signals DIY watershed

Peter Allen Clark

Bills Passed

Active Right to Repair Bill - 2023

Right to Repair Bill Introduced Historical

No Right to Repair

IFIXIT

First Regular Session | 74th General Assembly

Colorado General Assembly

HB23-1011

Consumer Right To Repair Agricultural Equipment

How does this website work?
Subscribe for more cool projects like this here

🥤 is the mcdonald's
    ice cream
    machine broken?

🟢 854 Langford Parkway
    Langford

🟢 2445 Millstream Road
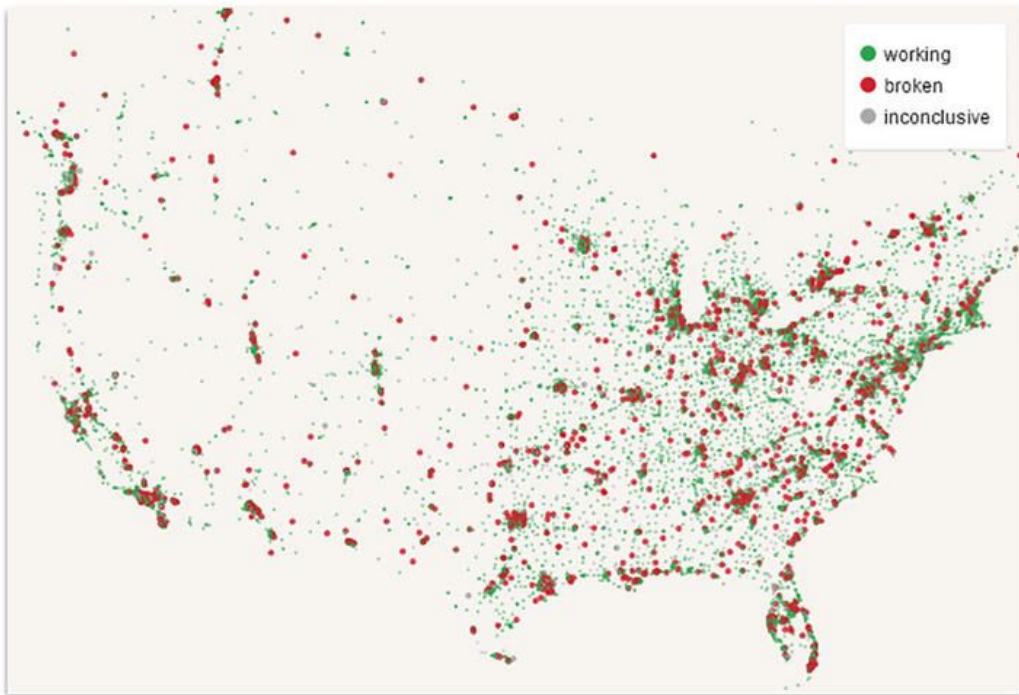   Victoria

🟢 1742 Island Hwy
    Victoria

🟢 1149 Esquimalt Road
    Esquimalt

🟢 4410 West Saanich Road
    Victoria

🟢 (Wal-Mart) 3460 Saanic...

🟢 working
🔴 broken
⚪ inconclusive

11%
Currently Broken

28.57%
in New York

16.54%
in Houston

15.25%
in Phoenix

15%
in Dallas

13.33%
in San Francisco

```
LOCKOUT HISTORY        4
    12/26/79      19:18
R BRL>41F AFTER SL
> Exit
```
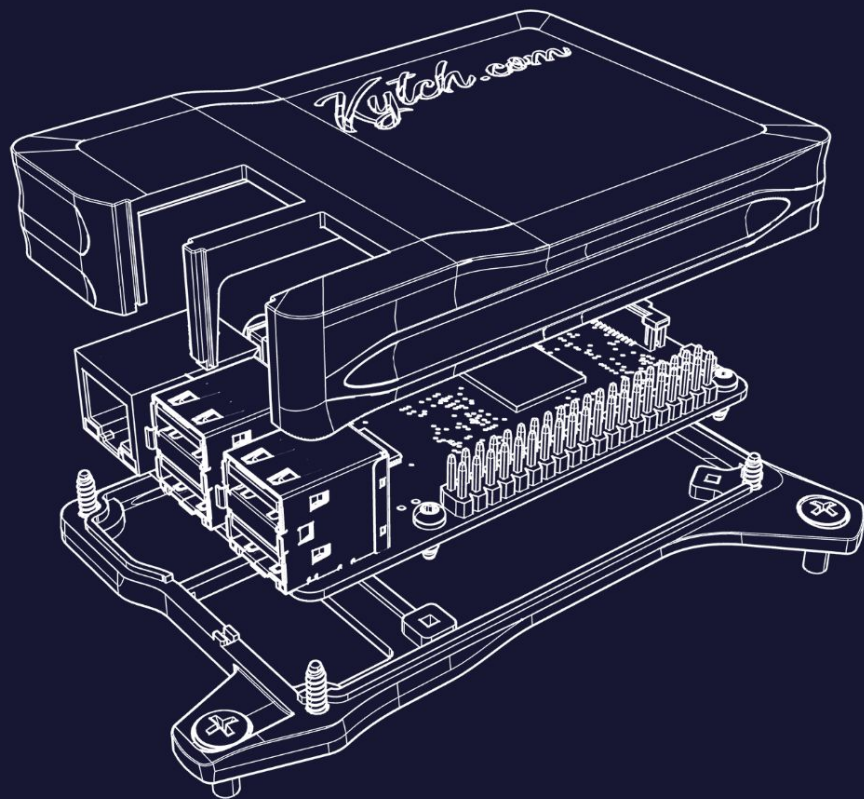
TAYLOR®

14

Kytch™

Built with Raspberry Pi inside.

AT YOUR **SERVICE**

We know your equipment represents your livelihood, so we take service and support to another level. Wherever you're located, whatever your specialty, we're here to keep you up and running.

ANDY GREENBERG   SECURITY   MAR 2, 2022 7:01 AM

Ice Cream Machine Hackers Sue McDonald's for $900 Million

Kytch alleges that the Golden Arches crushed its business— and left soft serve customers out in the cold.

f   🐦   ✉   🔖

IFIXIT
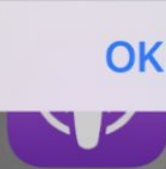
iPhone parts pairing is getting worse

Each model has had more serialized parts

Percentage of Parts (y-axis): 0%, 6.25%, 12.5%, 18.75%, 25%, 31.25%, 37.5%, 43.75%, 50%
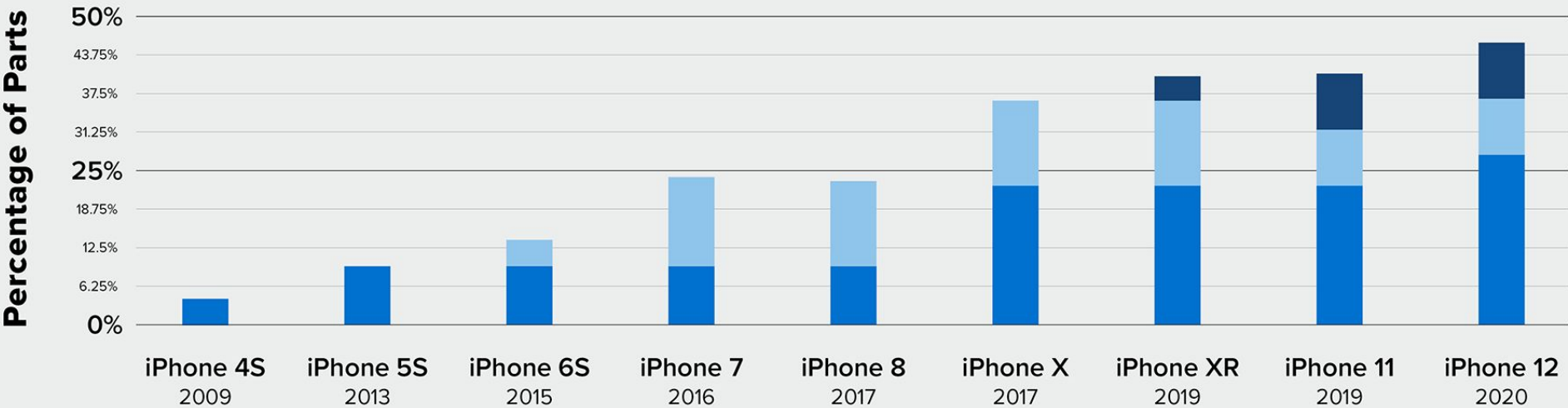
iPhone Model and Year Released (x-axis):
- iPhone 4S 2009
- iPhone 5S 2013
- iPhone 6S 2015
- iPhone 7 2016
- iPhone 8 2017
- iPhone X 2017
- iPhone XR 2019
- iPhone 11 2019
- iPhone 12 2020

Legend:
- Serialized and not replaceable
- Serialized and reprogammable
- Serialized and not reprogrammable

Data: Alexandre Isaac, Repair Academy

It's not just Apple

Lots of products limit repair through paired parts.

Chainsaws

Only dealers can update firmware on new parts for Husqvarna chainsaws and automowers.

TVs

On many TVs, mainboards, t-con modules and panels must be paired via a hidden routine.

Xbox One

The Xbox disc drive is paired to the motherboard, so replacing one means replacing both.
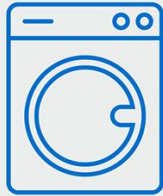
PS4/PS5

Sony took a cue from Microsoft and also paired the PlayStation disc drive with the motherboard.

Food Processors

When a Thermomix food processor throws an error, only official Vorwerk technicians can get the software to reset it.

Washing Machines

Many appliances require access to expensive manufacturer software to calibrate replacement parts.

Cars

Some parts are VIN locked, or paired to a car's serial number, requiring a dealer to program replacement parts.

Tractors

Replacing some parts on John Deere tractors requires dealers to input a code to get the tractor out of "limp mode."

Search

0:01 / 5:40

How Many PS4's Can I Stack? - Why We Need Right to Repair

TronicsFix ✔
1.36M subscribers

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👎
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"I worked in a call center that provided technical support to a gaming console with a high failure rate, and

if we saw that customers tampered with their devices physically or by software, we denied service on the hardware,

even if the customer was willing to pay."

Jorge Almazan

FullStack Labs

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Hacking the Xbox

An Introduction to Reverse Engineering

Andrew "bunnie" Huang

When DRM Comes For Your Wheelchair

BY **CORY DOCTOROW** | JUNE 7, 2022

WHEELCHAIR RIGHT TO REPAIR

93%

Of wheelchair users have **needed their chairs serviced** in the last year

Many repairs take **7 weeks or longer**

One of the biggest challenges is the **long wait for service and parts**
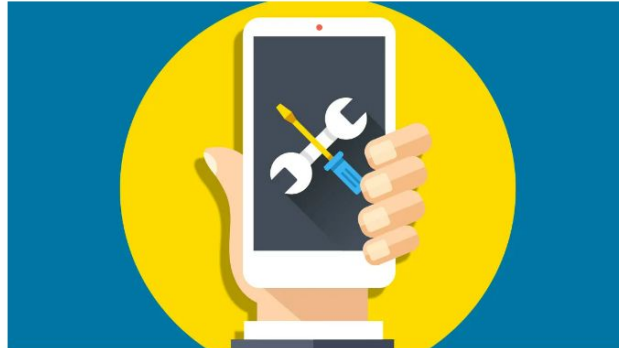
83%

Responded by saying that the **new law would "make life better** for wheelchair owners"

It's Now Okay to Bypass DRM Software to Fix Gadgets, but Right-to-Repair Fight Isn't Over

Consumer rights advocates praise a U.S. Copyright Office decision, while hoping for state legislation

By Nicholas De Leon
October 26, 2018

Kate Gray
@KateGrayCode
129 subscribers

Hacking Keurig 2.0 DRM

Watch later   Share

MORE VIDEOS

0:51 / 1:58

YouTube

Liberate the appliances! Washing machine hacker outsmarts anti-repair measures – Week in Repair

February 15, 2023 securepair_admin

Welcome to the Tractor Hacking team site
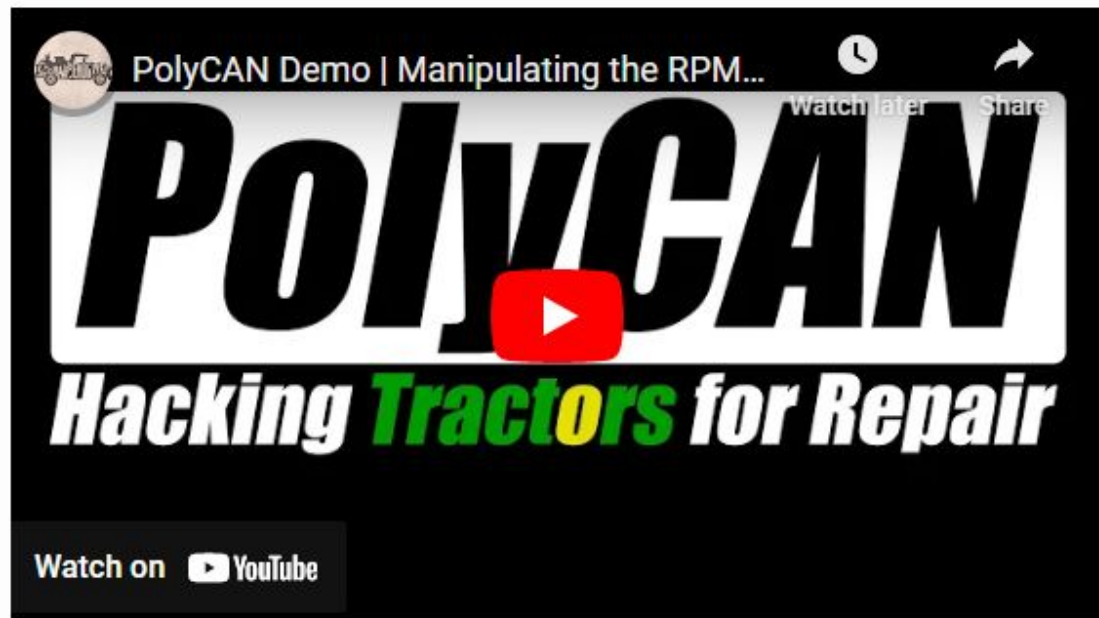
Pin no.	Allocation
A	ECU_GND
B	Unswitched Power [a]
C	Tractor Bus CAN_H
D	Tractor Bus CAN_L
E	Not Specified [b]
F	Not Specified [c]
G	Not Specified [c]
H	Implement Bus CAN_H
J	Implement Bus CAN_L

[a] A direct connection to positive battery power through a 10A fuse.
[b] Used for the shield of an SAE J1939 network in an SAE diagnostic connector.
[c] Used for SAE J1708 network in an SAE diagnostic connector.

polycan@ubuntu: ~/polycan/CANable/logs
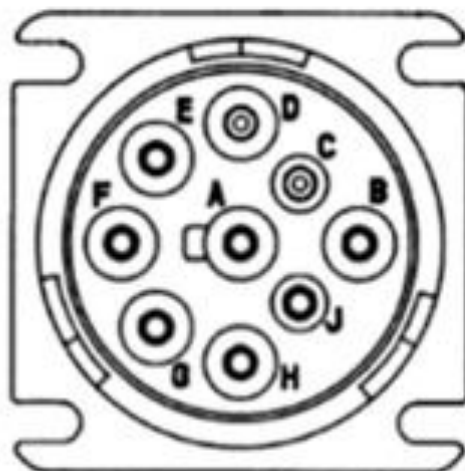
File Edit View Search Terminal Help

```
1486
31.581867694854736,65097,255,71,3,FF FF FF FF FF FF FF FF

1487
31.58286738395691,65091,255,71,3,00 00 FF FF 3F FF FF FF

1488
31.583439588546753,65092,255,71,3,00 00 FF FF 3F FF FF FF

1489
31.583954095840454,65534,255,6,3,5C 20 1C 20 1C FF FF FF

1490
31.58507990837097,61444,255,0,3,F0 FF AA 0A 1C FF FF FF

1491
31.595858097076416,61443,255,0,3,FF 00 32 FF 00 FF FF FF

1492
31.59759497642517,61184,255,0,3,64 06 50 7D FF FF FF FF

1493
31.600759506225586,126720,6,3,3,01 01 FF FF FF FF FF F5

1494
31.60231876373291,61184,0,6,1,64 15 1A F0 02 19 10 0E

1495
31.60365104675293,61444,255,0,3,F0 FF AA 0C 1C FF FF FF

1496
31.61413288116455,61443,255,0,3,FF 00 32 FF 00 FF FF FF

1497
31.61436891555786,61184,255,0,3,64 06 50 7D FF FF FF FF

1498
31.614870309829712,65266,255,0,6,2F 00 FF FF FF FF FF FF

1499
```

MORE VIDEOS

Diagnostic Trouble Code	Display	Solution
PTI 524238.31	Transmission Lever Not in Park	Left-Hand Reverser Lever Not in Park or Neutral at Power Up. Place lever in park or neutral. Restart vehicle. If code returns, have John Deere dealer repair at earliest convenience.

PolyCAN Demo | Manipulating the RPM gauge on a John Deere Tractor

Press Esc to exit full screen

SERVICE DUE   300

File Edit View Search Terminal Help

```
Sent: 2480      Recv: 3927
103.93508982658386,61443,255,0,3,FF 00 00 FF 00 FF FF FF

Sent: 2481      Recv: 3928
103.93542575836182,61184,255,0,3,64 06 00 7D FF FF FF FF

Sent: 2482      Recv: 3929
103.9363067150116,61184,250,0,6,64 01 FF 00 00 FF FF FF

Sent: 2483      Recv: 3930
103.93753600120544,126720,6,3,3,01 01 FF FF FF FF FF F5

Sent: 2484      Recv: 3931
103.94149231910706,61184,0,6,1,64 15 1F F0 CD 16 10 0E

Sent: 2485      Recv: 3932
103.94474506378174,65097,255,71,3,FF FF FF FF FF FF FF FF

Sent: 2486      Recv: 3933
103.94546508789062,65128,255,71,6,34 FF FF FF FF FF FF FF

Sent: 2487      Recv: 3934
103.95207238197327,65091,255,71,3,00 00 FF FF 3F FF FF FF

Sent: 2488      Recv: 3935
103.95254230499268,65535,255,6,6,73 FF FF FF FF FF FF FF

Sent: 2489      Recv: 3936
103.95945048332214,65092,255,71,3,00 00 FF FF 3F FF FF FF

Sent: 2490      Recv: 3937
103.96098923683167,65531,255,6,6,00 05 7D F8 FF FF FF FF

Sent: 2491      Recv: 3938
103.96143555641174,61444,255,0,3,F0 FF 7D 00 00 FF FF FF

Sent: 2492      Recv: 3939
103.96190214157104,61443,255,0,3,FF 00 00 FF 00 FF FF FF

Sent: 2493
```

tractorhacking.github.io

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CALIFORNIA IMPACT

Could These Students Improve the Global Food Supply? They're Finding Out — One Tractor at a Time

WRITTEN BY ROBYN KONTRA TANNER // PHOTOS BY JOE JOHNSTON | JULY 26, 2021

Sick.Codes ✔
@sickcodes

Playing Doom on a John Deere tractor display (jailbroken/rooted) at
@defcon

160.6K views

0:06 / 1:15

11:10 AM · Aug 14, 2022

981 Retweets   **181** Quotes   **3,633** Likes

TECH / ENTERTAINMENT / GAMING

Def Con hacker shows John Deere's tractors can run Doom

Security researcher Sick Codes got Doom to run on a John Deere display. Photo by PATRICK T. FALLON / AFP via Getty Images

/ Mow down your enemies

By EMMA ROTH
Aug 15, 2022, 3:11 PM PDT | ☐ 0 Comments / 0 New

LILY HAY NEWMAN   SECURITY AUG 13, 2022 9:31 PM

A New Jailbreak for John Deere Tractors Rides the Right-to-Repair Wave

A hacker has formulated an exploit that provides root access to two popular models of the company's farm equipment.

PHOTOGRAPH: PAUL MARRIOTT/ALAMY

Kevin Kenney, prairie provocateur. *Photographer: Walker Pickering for Bloomberg Businessweek*

Bloomberg

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Businessweek | Feature

Farmers Fight John Deere Over Who Gets to Fix an $800,000 Tractor

The right-to-repair movement has come to the heartland, where some farmers are demanding access to the software that runs their equipment.

By Peter Waldman and Lydia Mulvany
March 5, 2020 at 2:00 AM PST

GNU Public License

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

gpl-violations.org project prevails in court case on GPL violation by D-Link

Harald Welte — 2006-09-22

D-Link®

DIR-3040

Quick Install Guide

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https://tsd.dlink.com.tw/GPL

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Fountain Valley, CA 92708

‹ News

FSFE compliance workshop discovers GPL violation by FANTEC, Welte wins in court

on: 2013-06-26

Group: **FSF/Fight-to-Repair**

< Group:FSF

software freedom
conservancy

software freedom
conservancy

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VIZIO

Software Freedom Conservancy files right-to-repair lawsuit against California TV manufacturer Vizio Inc. for alleged GPL violations

Litigation is historic in nature due to its focus on consumer rights, filing as third-party beneficiary

FOR IMMEDIATE RELEASE

IRVINE, Calif. (Oct. 19, 2021) Software Freedom Conservancy announced today it has filed a lawsuit against Vizio Inc. for what it calls repeated failures to fulfill even the basic requirements of the General Public License (GPL).

America's
Smart TV Company

IFIXIT

APPLICATIONS

54 💬

GPL legal battle: Vizio told by judge it will have to answer breach-of-contract claims

Fine-print crucially deemed contractual agreement as well as copyright license in smartTV source-code case

Thomas Claburn   Mon 16 May 2022 // 23:36 UTC

The Software Freedom Conservancy (SFC) has won a significant legal victory in its ongoing effort to force Vizio to publish the source code of its SmartCast TV software, which is said to contain GPLv2 and LGPLv2.1 copyleft-licensed components.

After 2 years and more than a dozen ignored GPL source code requests,

SFC called Deere out publicly this week.

Software Freedom Conservancy Launches Self-Service Copyright Assignment Process

Developers Can Dedicate their Copyrights to Charity to Assure Software Rights

May 2, 2022

sfconservancy.org/assignment/

00:00 / 10:24

You deserve the right to repair your stuff

1,739,868 views | Gay Gordon-Byrne • TEDMonterey

Share   Add   ♡ Like (52K)   Read transcript

A self-declared "repair geek," Gay Gordon-Byrne is a driving force behind the right-to-repair movement, which aims to empower people to fix their stuff. She describes how the movement is gaining legislative momentum and breaks down how the global shift away from "throwaway society" can literally turn trash into treasure in a circular economy -- so we can all experience that "Yes! I fixed it!" feeling.

About the speaker

Gay Gordon-Byrne
Right-to-repair advocate

See speaker profile ›

Gay Gordon-Byrne fights for your right to repair the consumer goods you buy.

[your state].repair.org

Dear Bay Staters,

It's time to speak out for your right to repair

Massachusetts is already leading the world in repair, by passing the first-ever Right to Repair bill in 2012, for automobiles.

It's time to guarantee that Bay Staters can fix everything they own. This year, MA is considering two bills: HD 3826 and SD 793, which would give Massachusetts the right to fix cell phones and tablets.

Your legislators need to hear why repair matters to you—what have you tried to fix but couldn't? How have parts, tools, and repair documentation limitations made your life or business more difficult?

Use the form below to call or write your legislators—we'll track down their contact information.

Tell your repair story

ENTER YOUR RETURN ADDRESS

First Name *

Last Name *

Email *

Street Address *

City *

Zip/Postal Code *

Not in US?

START WRITING

☑ Opt in to email updates from The Repair Association

** This form does not work for addresses outside of Massachusetts — and may not work for some rural addresses. If you cannot use this form, do not be deterred. Look up your local Massachusetts representative the old-fashioned way, tell them you support Fair Repair, and tell them why. **

RIGHT TO REPAIR

Right to Repair

Want the right to repair your stuff? We are working to get Apple, John Deere and other companies to provide access to the information, tools and parts we need.

LIVE Washington   Bloomberg

Nathan Proctor
■ U.S. PIRG
CAMPAIGN FOR THE RIGHT
TO REPAIR SENIOR DIRECTOR

MICROSOFT WILL ALLOW MORE REPAIR SHOPS AFTER ACTIVIST PROTESTS
Staff | TPIN

Companies don't make things like they used to, and that's a big problem. Not long ago, most consumer goods and business products were easily

After years of advocacy, Apple reversed its longstanding policy against making spare parts, repair instructions and repair software tools available to customers in 2021.

Authorized Service Provider Only

NEW ECONOMY

Let us fix our stuff

We should give every consumer and every small business access to the parts, tools, and service information they need to repair products by passing Right to Repair reforms.

SIGN THE PETITION

fight
to
repair
weekly

Fight to Repair

Weekly dispatches from the front lines of the global fight for the right to repair. Written and curated by Paul Roberts, the founder of SecuRepairs.org and Editor at The Security Ledger, and Jack Monahan.
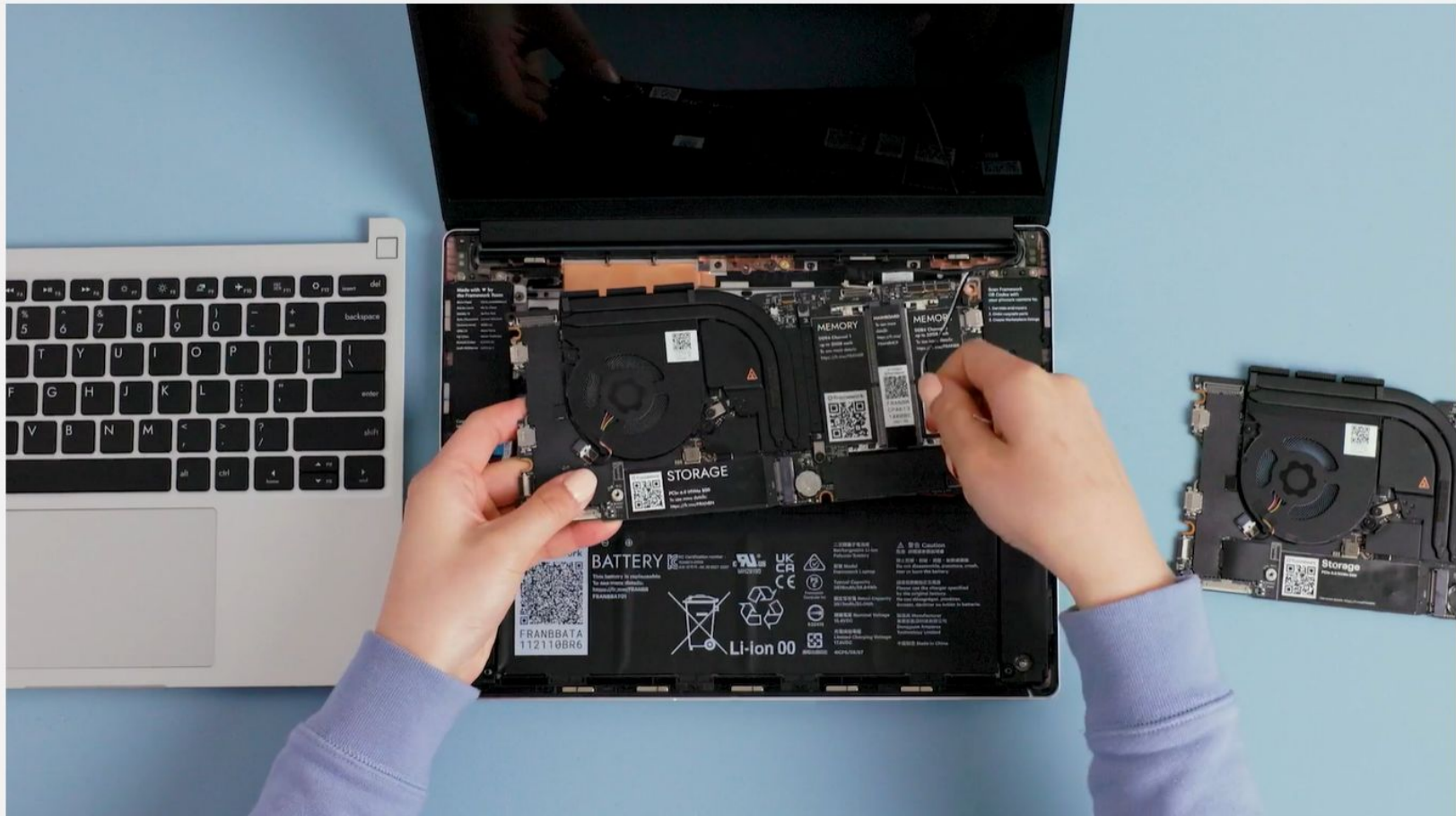
Launched 2 years ago

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Image: Flickr, opengridscheduler, public domain

Linux on the Framework Laptop

We designed the Framework Laptop from the outset to be a great Linux laptop, and the Framework Laptop DIY Edition comes with no OS loaded to let you bring your favorite Linux distribution. We deliberately selected components and modules that didn't require new kernel driver development and have been providing distro maintainers with pre-release hardware to test to improve compatibility. We're also working on enabling firmware updates through LVFS to complete the Linux experience.

Fedora 37 Installation 4.2 | m | 03/01/2023 | by Matt Hartley   Details

Fedora 37 Installation on the Framework Laptop

Written By: Nirav Patel (and one other contributor)

💬 Comments: 39   ⭐ Favorites: 2   ✓ Completions: 18

🎚 Difficulty	▬▬ ▭ ▭ **Easy**
☰ Steps	8
🕐 Time Required	00:10:00 - 00:20:00
🔖 Sections	1 ⌄
⚠ Flags	0 ⌄

FrameworkComputer / EmbeddedController Public

Notifications   Fork 46   Star 773

<> Code   ⊙ Issues 8   ⨩ Pull requests 6   ▷ Actions   ⛊ Security   Insights

⑂ hx20-hx30 ∨   ⑂ 6 branches   ⬠ 0 tags

Go to file   Code ∨

kiram9 Merge pull request #5 from DHowett/hx20 ...   ✓ 38c1b38 on Jan 4   ⏱ 16,715 commits

📁 .github	Merge pull request #535 from FrameworkComputer/lin...	3 months ago
📁 .vscode	add vscode workspace files	3 years ago
📁 baseboard	Add host command to check privacy switch status (#513)	3 months ago
📁 board	fix i2c controller mapping on TGL	3 months ago
📁 builtin	Replace __attribute__((noreturn)) with noreturn	3 years ago
📁 chip	Merge branch 'hx30' into hx20-hx30	4 months ago
📁 common	Fix: auto brightness decrease curve not smooth enoug...	last year

About

Embedded Controller firmware for the Framework Laptop

📖 Readme

⚖ BSD-3-Clause license

☆ 773 stars

👁 20 watching

⑂ 46 forks

Releases

No releases published
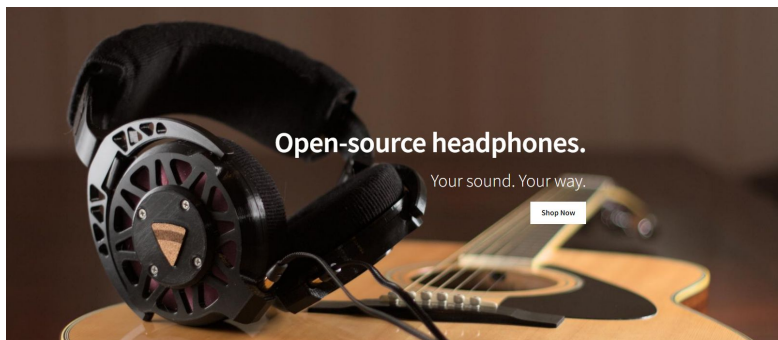
Camera upgrades for your Fairphone 3

Discover the greener way to get new features

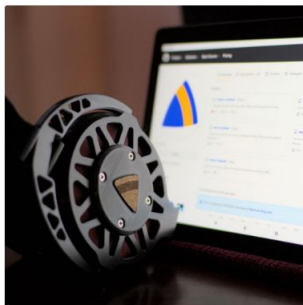Discover modules   How to upgrade

ploopy

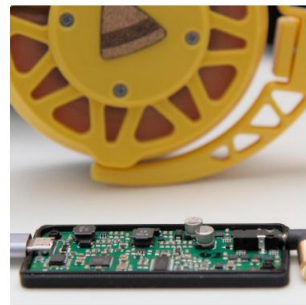**Open-source headphones.**

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Open-source. More choices. More freedom.

Source files for everything are available, for free, forever, without any limits

Complete documentation for assembly, modifications, and maintenance

Full transparency on parts, fabrication methods, and how it all works

Dare to Repair! 3D Printed Repair Parts Contest

Article by:

Kay Kay Clapp

@kaykay

3D Printing for Repair Guide

Julieta Bolaños Arriola, Alma van Oudheusden, Bas Flipsen & Jeremy Faludi

TU Delft Open

BEST SPARE PARTS STL FILES FOR REPAIR THANKS TO 3D PRINTING

DOWNLOAD 3D MODELS OF SPARE PARTS

You are looking for your own 3D printable Spare Parts platform? Contact us. This is probably the first use you think of when you think of 3D printing, repairing small broken plastic parts that are impossible to find on the market. In this collection, find enough to repair all the broken objects in your home and give them a second life!
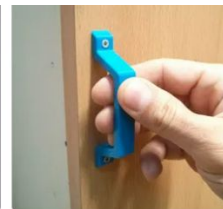
Porsche Can Now 3D-Print Parts For The 959 Supercar

The new components can help Porsche 964 and 356 owners, too.

Feb 12, 2018 at 2:36pm ET

0💬

By: **Chris Bruce**

TRANSPO

The ancient computers in the Boeing 737 Max are holding up a fix

The perils of fixing a hardware problem with software

By **DARRYL CAMPBELL**
Apr 9, 2020, 5:00 AM PDT | 🗩 0 Comments / 0 New

Illustration by Alex Castro / The Verge

TESLA

Tesla Full Self-Driving Beta v11 is coming this weekend, if you believe Elon Musk

Fred Lambert | Mar 15 2023 - 6:25 am PT   💬 117 Comments

After months of waiting, Tesla Full Self-Driving Beta v11 is going to a wide release this weekend, if you believe Elon Musk.

Technology / New Vehicles

Ford patents system for vehicles to repossess themselves

With this tech, if you don't make payments, your Ford could drive itself to the impound lot — or even the scrapyard

Jil McIntosh

Published Feb 28, 2023 • Last updated Mar 01, 2023 • 3 minute read

☐ 6 Comments

An August 2015 file photo of tow trucks in Ottawa PHOTO BY MATT DAY /Postmedia files

"In 2025, there will be

55.7 billion

connected IoT devices."

– KPMG, 20 Predictions for the Next 20 Years

IFIXIT

software is everywhere,
and it must be **free**

free to hack
share
repair

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Together we can fix any thing.

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